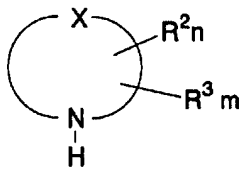
In the Claims

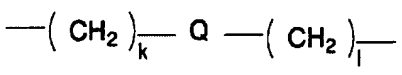
Claims 1 - 17 (Cancelled)

18. (Currently Amended) A process for producing a nitrogenous heterocyclic compound defined by the general formula (3):



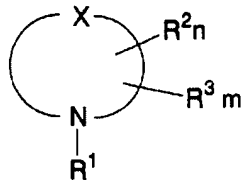
(3)

wherein R^2 and R^3 independently denote i) a hydrogen atom; ii) a lower alkyl having 1 to 4 carbon atoms; iii) a lower alkoxyl having 1 to 4 carbon atoms; iv) a hydroxyl group; v) a mercapto group; vi) an (un)substituted amino group; vii) an aryl whose aromatic ring may be unsubstituted or substituted with an alkyl having 1 to 4 carbon atoms, an alkoxyl having 1 to 4 carbon atoms, or a halogen atom; or viii) an aralkyl whose aromatic ring may be unsubstituted ~~re~~or substituted with an alkyl having 1 to 4 carbon atoms, an alkoxyl having 1 to 4 carbon atoms, or a halogen atom and may be the same or different groups; m and n independently denote an integer of 0 to 3; and X denotes a residual group of a nitrogenous heterocyclic ring defined by the general formula (2):



(2)

wherein Q denotes CH_2, NR^4, or O, wherein R^4 denotes i) a hydrogen atom; ii) a lower alkyl having 1 to 4 carbon atoms; iii) a lower alkoxyl having 1 to 4 carbon atoms; iv) an aryl whose aromatic ring may be unsubstituted or substituted with an alkyl having 1 to 4 carbon atoms, an alkoxyl having 1 to 4 carbon atoms, or a halogen atom; v) an aralkyl whose aromatic ring may be unsubstituted or substituted with an alkyl having 1 to 4 carbon atoms, an alkoxyl having 1 to 4 carbon atoms, or a halogen atom; or vi) an aralkyloxy whose aromatic ring may be unsubstituted or substituted with an alkyl having 1 to 4 carbon atoms, an alkoxyl having 1 to 4 carbon atoms, or a halogen atom; k and l independently denote an integer of 1 to 4; and k + l is 3 to 6: by carrying out hydrogenolysis of an N-substituted nitrogenous heterocyclic compound defined by the general formula (1):



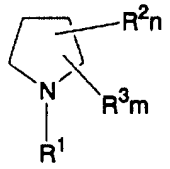
(1)

wherein R^1 denotes an (un)substituted benzyl group; R^2, R^3, X, m, and n are the same as defined above, with normal pressure hydrogen in the presence of a catalyst.

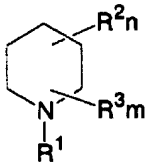
19. (Previously Presented) The process according to claim 18, wherein the catalyst is Pd.

20. (Previously Presented) The process according to claim 18, wherein the hydrogenolysis is carried out in a water-based solvent.

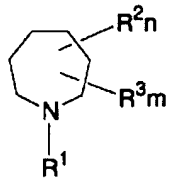
21. (Previously Presented) The process according to claim 18, wherein the N-substituted nitrogenous heterocyclic compound defined by the general formula (1) is one of a N-substituted nitrogenous heterocyclic compound defined by the following general formulas (4) to (7):



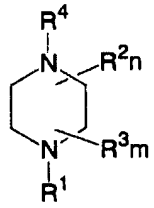
(4)



(5)

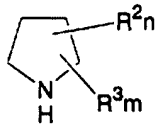


(6)

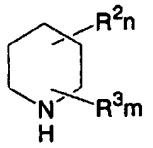


(7)

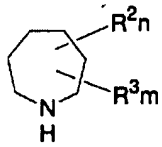
wherein R^1, R^2, R^3, R^4, m, and n are the same as defined above, and the nitrogenous heterocyclic compound defined by the general formula (3) is a nitrogenous heterocyclic compound defined by the following general formulas (8) to (11):



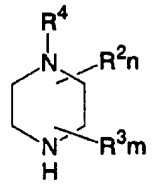
(8)



(9)



(10)



(11)

wherein R^2, R^3, R^4, m, and n are the same as defined above.

22. (Previously Presented) The process according to claim 21, wherein R^2, R^3, and R^4 independently denote a group selected from a hydrogen atom, methyl, aminomethyl, hydroxymethyl, ethyl, hydroxyl, amino, methylamino, benzylamino, ethoxycarbonylamino, tert-butoxycarbonylamino, benzyloxycarbonylamino, methoxy, and benzyl in the general formulas (4) to (11).

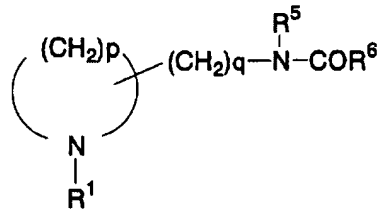
23. (Previously Presented) The process according to claim 21, wherein the N-substituted nitrogenous heterocyclic compound defined by the general formulas (4) to (7) is a compound selected from 3-amino-1-benzylpyrrolidine, 3-amino-1-(4-methylbenzyl)pyrrolidine, 3-methylamino-1-benzylpyr-rolidine, 1-benzyl-3-tert-butoxycarbonylaminopyrrolidine, 3-benzylamino-1-benzylpyrrolidine, 1-benzyl-3-hydroxypyrrolidine, 1-benzyl-3-methoxypyrrolidine, 3-amino-1-benzyl-4-hydroxypyr-rolidine, 3-benzylamino-1-benzyl-4-hydroxypyrrolidine, 2-aminomethyl-1-benzylpyrrolidine, 2-hydroxymethyl-1-benzylpyrrolidine, 3-ethoxycarbonylamino-1-(4-methylbenzyl)pyrrolidine, 1-benzyl-3-benzyloxycarbonylaminopyrrolidine, 3-amino-1-benzylpiperidine, 1-benzyl-3-methylpi-peridine, 3-amino-1-benzylhexamethyleneimine, 1-benzyl-3-methylpiperazine, and 1,4-dibenzyl-3-methylpiperazine.

24. (Previously Presented) The process according to claim 18, wherein the N-substituted nitrogenous heterocyclic compound defined by the general formula (1) is an optically active compound and the nitrogenous heterocyclic compound defined by the general formula (3) is an optically active compound.

25. (Previously Presented) The process according to claim 21, wherein the N-substituted nitrogenous heterocyclic compound defined by any one of the general formulas (4) to (7) is an opti-

cally active compound and the nitrogenous heterocyclic compound defined by any one of the general formulas (8) to (11) is an optically active compound.

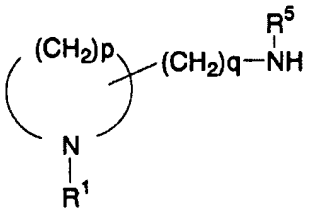
26. (Currently Amended) The process according to claim 18, wherein the N-substituted nitrogenous heterocyclic compound defined by the general formula (1) is a compound defined by the general formula (12):



(12)

wherein R^1 denotes an (un)substituted benzyl group; R^5 denotes a hydrogen atom or an alkyl having 1 to 4 carbon atoms; R^6 denotes i) an alkyl having 1 to 4 carbon atoms; ii) an alkoxyl having 1 to 4 carbon atoms; iii) phenyl; iv) phenyloxy; v) an aralkyl whose aromatic ring may be unsubstituted or substituted with an alkyl having 1 to 4 carbon atoms, an alkoxyl having 1 to 4 carbon atoms, or a halogen atom; or vi) an aralkyloxy whose aromatic ring may be unsubstituted or substituted with an alkyl having 1 to 4 carbon atoms, an alkoxyl having 1 to 4 carbon atoms, or a halogen atom; q denotes 0 ~~or 1~~; and p denotes an integer of 3 to 6.

27. (Previously Presented) The process according to claim 26, wherein the N-substituted nitrogenous heterocyclic compound defined by the general formula (12) is a compound obtained by reaction of an N-substituted nitrogenous heterocyclic compound defined by the general formula (13):



(13)

wherein R^1, R^5, p, and q independently denote as described above with an acid halide compound or an acid anhydride.

28. (Previously Presented) The process according to claim 22, wherein the acid halide compound or the acid anhydride is defined by the general formula (14) or (15):

R^6COY (14) $(R^6CO)_2O$ (15)

wherein R^6 denotes as described above and Y denotes a chlorine atom or a bromine atom.

29. (Previously Presented) The process according to claim 22, wherein the reaction is carried out while pH is controlled to be in a range of 9 to 13.

30. (Previously Presented) The process according to claim 22, wherein the reaction is carried out in a water-based solvent.

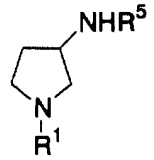
31. (Previously Presented) The process according to claim 22, wherein the reaction is carried out in co-presence of a surfactant.

32. (Previously Presented) The process according to claim 22, wherein the acid anhydride defined by the general formula (15) is di-tert-butyl dicarbonate.

33. (Previously Presented) The process according to claim 31, wherein the surfactant is an alkyl ether sulfonic acid salt or a quaternary ammonium salt.

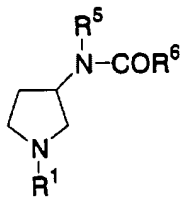
34. (Previously Presented) The process according to claim 27, wherein the N-substituted nitrogenous heterocyclic compound defined by the general formula (13) is an optically active compound and the nitrogenous heterocyclic compound defined by the general formula (12) is also an optically active compound.

35. (Previously Presented) The process according to claim 27, wherein the 1-substituted nitrogenous heterocyclic compound defined by the general formula (13) is a 1-substituted-3-aminopyrrolidine derivative defined by a general formula (16):



(16)

wherein R^1 and R^5 independently denote as described above and the nitrogenous heterocyclic compound defined by the general formula (12) is a 3-substituted-aminopyrrolidine compound defined by the general formula (17):



(17)

wherein R^1, R^5, and R^6 independently denote as described above.